

**TIMOTHY CHARLES PLOWMAN**  
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*"Now cracks a noble heart. Good night, sweet prince,  
and flights of angels sing thee to thy rest."*

—Hamlet

Ethnobotany has lost one of its most devoted disciples and beloved practitioners with the tragic passing of Timothy Plowman. A man of generosity and kindness, modesty and honour, his untimely death has cut short a remarkable career of immense promise. Already far on the way as one of the most discerning, original and effective naturalists of our century, Tim was a gentleman, a friend of everyone, an understanding and devoted teacher, a scholar of extraordinary depth, a tireless and demanding researcher happy to share his experience and counsel with whoever sought his advice.

Tim Plowman's interest in and love of plants developed as a child growing up in the temperate woodlands surrounding Harrisburg, Pennsylvania. An avid collector even as a boy, his passion for plants grew into the central metaphor of his life. After attending college at Cornell University he went as a graduate student to the Botanical Museum of Harvard University where he worked under the direction of Richard Evans Schultes. Such was his promise that even before enrolling in the graduate school, Tim was dispatched by Professor Schultes to the Amazon on an expedition that would define the course of his professional life. In the fall of 1966 Tim returned from Brazil flush with excitement and fully committed to spending the rest of his life in pursuit of the mysteries of the tropical rainforest. Having received his Master's Degree in 1970, he undertook for his doctoral dissertation a revision of the genus *Brunfelsia* (Solanaceae). His thesis, which included a comprehensive chapter on the ethnobotany of the genus, was based on over 15 months of continuous fieldwork in Central and South America and the Caribbean.

By the time his Ph.D. was officially conferred in 1974, Tim was already deeply involved in the project for which he will always be remembered—a 15 year effort to decipher the complex taxonomy of *Erythroxylum* and to study the ethnobotany of coca, the sacred leaf of the Andes and the notorious source of cocaine. Of Tim's 80 published scientific papers, 46 are related to his work on *Erythroxylum* and his position as the world's authority on the genus enabled him to speak eloquently and powerfully in defense of the traditional use of coca by beleaguered indigenous peoples of the Andes and Northwest Amazon.

Tim left Harvard for the Field Museum of Natural History in 1978 where he became tenured in 1983, and was appointed curator in 1988. If Tim grew up at the Botanical Museum at Harvard, he came into his own at the Field Museum and his years there were both the happiest and most productive of his remarkable career. His interdisciplinary interests in systematics, ethnobotany and ethnopharmacology led him to interact with an increasingly diverse group of scholars which included not only fellow botanists but also archaeologists, phytochemists, ethnographers and pharmacologists. In addition to carrying out an active scien-



*Photograph by Wade Davis*

*Tim Plowman while on a botanical expedition in Peru.*

tific research program as co-principal investigator of the National Science Foundation Projeto Flora Amazonica, he served on the editorial boards of numerous journals including *Flora Neotropical Monographs*, *Advances in Economic Botany*, *Journal of Psychoactive Drugs* and *Journal of Ethnopharmacology*. Between 1984-1988 he was Co-Editor-in-Chief of the *Journal of Ethnopharmacology* and the Scientific Editor

of *Fieldiana*. He was vice president of the Beneficial Plant Research Association, a Fellow of the Linnean Society, and a member of many professional societies including the American Society of Plant Taxonomists, Society of Economic Botany, Council of Biology Editors, Society of Ethnobiology and the New England Botanical Club. As chairman of the Botany Department of the Field Museum of Natural History (1986-1988) Tim secured a substantial increase in National Science Foundation funding for the herbarium and developed a new facility for the curation of economic collections. His enthusiasm, spirit of cooperation, professional rigor and passionate commitment to botany proved infectious and under his leadership, morale at the Botany Department soared.

Credentials alone, however, present but a shadow of the man who affected so many lives in such profound ways. For Tim, life was but a vehicle for seeking understanding and for expressing freedom. If there is a word to describe Timothy Plowman it would be freedom, and he lived with the conviction that every person had the right to pursue his or her own path unshackled of the burdens of social convention. Equally at ease in the tranquil world of plants or amidst the society of people, Tim had a charisma hot to the touch, and those privileged to have spent time with him often developed a respect that bordered on reverence. For he was a true renaissance scholar, a man out of time, whose breadth of interests and passions went far beyond the boundaries of his beloved field of botany.

But it is as a botanist and intrepid plant explorer that Tim will be best remembered. He spent over five years of his life in the most remote and inhospitable regions of the Andes and Amazon, making over 15,000 collections of unsurpassed quality. Typically he always considered his time in the field as a privilege, and he never failed to remember his fellow botanists toiling away in the less romantic confines of the herbaria. Tim seemed to have a rolodex in his head that recorded the name of every specialist in every group of plants, and he constantly was on the lookout for specimens that might prove useful to a distant colleague. He collected everything. His voucher specimens were not only complete, but aesthetically beautiful and whenever possible he augmented them with invaluable collections of live material. Living plants, many new to science and collected first by Tim, may be found in botanical gardens throughout the world.

In the rainforests of the Amazon Tim felt the fullness of life. He marvelled at the thousand themes, the infinitude of form, shape and texture that so clearly mocked the terminology of temperate botany. He always travelled in the forest as a student and his commitment to ethnobotany grew in part from his direct experience with the indigenous peoples who understood the plants in ways that he believed he could only hope to emulate. To be in the forest, he said, was to be in Eden, and to say the names of the plants was to recite the names of the Gods. He believed that all forms of life were manifestations of the sacred. Hence for Tim biological and cultural diversity represented far more than the foundation of stability, they were articles of faith, fundamental truths that indicated the way things were supposed to be.

Tim had a special affinity for Indians, and his uncanny ability to gain their trust and confidence was one measure of the deep respect he had for their way

of life. He empathized with their worldview which defined man as but one element inextricably linked to the whole of creation. It was this unique cosmological perspective, he believed, that enabled the Indians to comprehend implicitly the intricate ecological balance of the forest he loved so dearly. Tim viewed with pain, dismay and increasing anger this other worldview, one in which man stands apart, that now threatens the forest with devastation. It was one of his fondest hopes that the lessons of ethnobotany might ultimately facilitate a dialogue between these two worldviews such that folk wisdom might temper and guide the inevitable development processes that today ride roughshod over much of the earth. The many of us who loved him as a brother and respected him as a colleague can do no better service to his memory than to continue our own struggles to make this dream of his a reality.

Wade Davis

Publications of Timothy C. Plowman:

1. Folk uses of New world aroids. *Economic Botany* 23:97-122. 1969.
2. *Latua pubiflora*: magic plant from southern Chile. *Bot. Mus. Leaflet*. Harvard Univ. 23:61-92. 1971.
3. Four new *Brunfelsias* from northwestern South America. *Bot. Mus. Leaflet*. Harvard Univ. 23:245-272. 1973.
4. *Latua*. In H. Schleiffer, ed. *Sacred narcotic plants of the New World Indians*. Hafner Press. New York. Pp. 134-138. 1973.
5. Two new Brazilian species of *Brunfelsia*. *Bot. Mus. Leaflet*. Harvard Univ. 24:37-48. 1974.
6. *Cannabis*: an example of taxonomic neglect. *Bot. Mus. Leaflet*. Harvard Univ. 23:337-367. 1974. (with R.E. Schultes, W.E. Klein & T.E. Lockwood).
7. Nutritional value of coca. *Bot. Mus. Leaflet*. Harvard Univ. 24:113-119. 1975. (with J.A. Duke & D. Aulik).
8. *Cannabis*: an example of taxonomic neglect. In V. Rubin, ed. *Cannabis and culture*. World Anthropology Series. Mouton Publishers. The Hague, Pp. 21-38. 1975. (with R.E. Schultes, W.E. Klein & T.E. Lockwood).
9. Orthography of *Erythroxylum*. *Taxon* 25:141-144. 1976.
10. Tommie Earl Lockwood, an obituary. *Solanaceae Newsletter* 3:22. 1976.
11. Systematics and biogeography of *Brunfelsia*, abstract. *The Biology and Taxonomy of the Solanaceae Abstract Volume*. University of Birmingham, England. P. 40. 1976.
12. Systematics of the genus *Brugmansia*, a summary of the work of Tommie E. Lockwood. *The Biology and Taxonomy of the Solanaceae Abstract Volume*. University of Birmingham, England. P. 54. 1976.
13. *Brunfelsia*. In L.H. Bailey Hortorium, ed. *Hortus Third*. Macmillan Co. New York. P. 185. 1976.

14. Determination of cocaine in some South American species of *Erythroxylum* using mass fragmentography. *Phytochemistry* 16:1753-1755. 1977. (with B. Holmstedt, E. Jaatmaa & K. Leander).
15. *Brunfelsia* in Ethnomedicine. *Bot. Mus. Leaflet*. Harvard Univ. 25:289-320. 1977.
16. Book Review: Cocaine: a drug and its social evolution. *The Apothecary* 90(1):44. 1978.
17. *Virola* as an oral hallucinogen among the Boras of Peru. *Bot. Mus. Leaflet*. Harvard Univ. 25:259-272. 1978. (with R. E. Schultes & T. Swain).
18. Chromosome numbers in neotropical *Erythroxylum* (Erythroxylaceae). *Bot. Mus. Leaflet*. Harvard Univ. 26:203-209. 1978. (with L. Rudenberg & C.W. Greene).
19. IOPB Chromosome Report LX: Erythroxylaceae. *Taxon* 27:224. 1978. (with L. Rudenberg & C.W. Greene).
20. Cocaine in blood of coca chewers. *Bot. Mus. Leaflet*. Harvard Univ. 26:199-201. 1978. (with B. Holmstedt, J.E. Lindgren & L. Rivier).
21. A new section of *Brunfelsia*: Section *Guianenses* Plowman. In J.G. Hawkes, ed. Systematic notes on the Solanaceae. *Bot. J. Linn. Soc.* 76:294-295. 1978.
22. Cocaine in blood of coca chewers. *J. Ethnopharmacol.* 1:69-78. 1979. (with B. Holmstedt, J.E. Lindgren & L. Rivier).
23. The genus *Brunfelsia*: a conspectus of the taxonomy and biogeography. In J.G. Hawkes, R.N. Lester & A.D. Skelding, eds. *The biology and taxonomy of the Solanaceae*. Academic Press. New York. Pp. 475-491. 1979.
24. Coca pests and pesticides. *J. Ethnopharmacol.* 1:263-278. 1979. (with A.T. Weil).
25. Botanical perspectives on coca. *J. Psychedelic Drugs* 11:103-118. 1979.
26. IOPB Chromosome Reports LXIII. *Brunfelsia* (Solanaceae). *Taxon* 28:268-269.
27. The ethnobotany of *Brugmansia* by T.E. Lockwood. *J. Ethnopharmacol.* 1:147-164. 1979. (ed. with R.E. Schultes).
28. The identity of Amazonian and Trujillo coca. *Bot. Mus. Leaflet*. Harvard Univ. 27:454-468. 1979.
29. Aspectos botánicos de la coca. In F.R. Jeri, ed. *Cocaina 1980: Actas del seminario interamericano sobre aspectos médicos y sociológicos de la coca y la cocaina*. Pacific Press. Lima. Pp. 100-117. 1980.
30. Botanical perspectives on coca. In F.R. Jeri, ed. *Cocaine 1980: Proceedings of the interamerican seminar on medical and sociological aspects of coca and cocaine*. Pacific Press. Lima. Pp. 90-115. 1980.
31. Letter from Brazil. *Field Museum Bulletin* 51(7):24-25. 1980.
32. Coca. *Field Museum Bulletin* 51(6):17-21. 1980.
33. Chamairo: *Mussatia hyacinthina*, an admixture of coca from Amazonian Peru and Bolivia. *Bot. Mus. Leaflet*. Harvard Univ. 28:253-262. 1980.

34. Indole alkaloids in Amazonian Myristicaceae: field and laboratory research. *Bot. Mus. Leafl. Harvard Univ.* 28:215-234. 1980. (with B. Holmstedt, J.E. Lindgren, L. Rivier, R.E. Schultes & O. Tovar).
35. Amazonian coca. *J. Ethnopharmacol.* 3:195-225. 1981.
36. Five new species of *Brunfelsia* from South America (Solanaceae). *Fieldiana Botany, n.s.*, No. 8:1-16. 1981.
37. *Brugmansia* (Baum-Datura) in Sudamerika. In G. Volger, ed., *Rausch und Realität: Drogen in Kulturvergleich. Materialienband zu einer Ausstellung des Rautenstrauch-Joest-Museums für Volkerkund der Stadt Köln.* 2:436-443. 1981.
38. Fate of cocaine in the Lymantriid *Eloria noyesii*, a predator of *Erythroxylum coca*. *Phytochemistry* 20:2499-2500. 1981. (with M.S. Blum & L. Rivier).
39. The identification of coca (*Erythroxylum* spp.): 1860-1910. *Bot. J. Linn. Soc.* 84:329-353. 1982.
40. *Heliconia zebrina*: a new name for a handsome Peruvian *Heliconia* (Musaceae). *Baileya* 21:149-157. (with W.J.E. Kress & H. Kennedy).
41. Biosystematics and evolution of cultivated coca (*Erythroxylaceae*). *Systematic Botany* 7:121-133. 1982. (with B.A. Bohm & F.R. Ganders).
42. The effects of field preservation on alkaloid content of fresh coca leaves (*Erythroxylum* spp.). *J. Ethnopharmacol.* 6:287-291. 1982. (with M.J. Balick & L. Rivier).
43. Three new species of *Erythroxylum* (*Erythroxylaceae*) from Venezuela. *Brittonia* 34:442-457. 1982.
44. Cocaine and cinnamoylcocaine content of thirty-one species of *Erythroxylum* (*Erythroxylaceae*). *Ann. Bot. (London)* 51:641-659. 1983. (with L. Rivier).
45. Collecting in the Upper Amazon. *Field Museum Bulletin* 54(3):8-13. 1983.
46. *Erythroxylaceae*. In S.A. Mori, B.M. Boom, A.M. de Carvalho & T.S. dos Santos. *Southern Bahian Moist Forests.* *Bot. Rev.* 49:214-215. 1983.
47. The effects of field preservation on alkaloid content in fresh coca leaves (*Erythroxylum* spp.). *Atti del II Seminario Internazionale sulle Piante Medicinali ed Aromatiche.* Citta de Castello. Pp. 81-86. 1983. (with M.J. Balick & L. Rivier).
48. New species of *Erythroxylum* from Brazil and Venezuela. *Bot. Mus. Leafl. Harvard Univ.* 29:273-290. 1983.
49. Morphological studies of archaeological and recent coca leaves (*Erythroxylum* spp.). *Bot. Mus. Leafl. Harvard Univ.* 29:297-341. 1983. (with P.M. Rury).
50. Useful plants of the Siona and Secoya Indians of eastern Ecuador. *Fieldiana Botany n.s.*, 15:1-63. 1984. (with W.T. Vickers).
51. The ethnobotany of coca (*Erythroxylum* spp., *Erythroxylaceae*). In G.T. Prance & J.A. Kallunki, eds. *Ethnobotany in the Neotropics.* *Advances in Economic Botany* 1:62-111. 1984.

52. The origin, evolution and diffusion of coca (*Erythroxylum* spp.) in South and Central America. In D. Stone, ed., *Pre-Columbian Plant Migration. Papers of the Peabody of Archaeology and Ethnology* 76:125-163. 1984.
53. Alkaloids of some South American *Erythroxylum* species. *Phytochemistry* 24:2285-2289. 1985. (with Y.M.A. El-Imam & W.C. Evans).
54. Brunfelsamidine: a novel convulsant from the hallucinogenic plant *Brunfelsia grandiflora*. *Tetrahedron Letters* 26:2623-2624. 1985. (with H.A. Lloyd, H.M. Fales, M.E. Goldman, D.M. Jerina & R.E. Schultes).
55. A new species of *Erythroxylum* (*Erythroxylaceae*) from Suriname and Venezuela. *Phytologia* 58:172-177. 1985.
56. Cocaine in herbal tea. *J. Amer. Med. Assoc.* 255(1):40. 1986. (with R.K. Siegel, M.A. Elsohly, P.M. Rury & R.T. Jones).
57. New taxa of *Erythroxylum* (*Erythroxylaceae*) from the Amazon Basin. *Suplemento, Acta Amazonica* 14(1/2):117-143. 1984. (appeared in 1986).
58. A new species of *Lasiadenia* (*Thymelaeaceae*) from Venezuela. *Brittonia* 38(2):114-118. (with L.I. Nevling, Jr.).
59. Coca chewing and the botanical origins of coca (*Erythroxylum* spp.) in South America. Pp. 5-33. In D. Pacini & C. Franquemont, eds. 1986. *Coca and Cocaine: Effects on people and policy in Latin America*. Co-published by Cultural Survival, Cambridge, Massachusetts, and Latin American Studies Program, Cornell University, Ithaca.
60. Four new species of *Erythroxylum* from northeastern Brazil. *Brittonia* 38(3):189-200. 1986.
61. Type photographs at Field Museum of Natural History. *Taxon* 35:932-934. 1986. (with W.E. Grime).
62. Ten new species of *Erythroxylum* (*Erythroxylaceae*) from Bahia, Brazil. *Fieldiana, Botany, n.s.*, 19:1-41. 1987.
63. Book review: *Economic and medicinal plant research*, edited by H. Wagner, H. Hikino & N.R. Farnsworth. *American Scientist* 75(2):207-208. 1987.
64. Type photographs at Field Museum of Natural History (reprinted). *Taxon* 36:425-428. 1987. (with W.E. Grime).
65. Book review: *Cocaine: a drug and its social evolution*, revised edition, by L. Grinspoon & J.B. Bakalar. *Quarterly Review of Biology* 62:224-225. 1987.
66. Book review: *Le genre Inga (Legumineuses, Mimsoideae) en Guyane Française. Systematique, Morphologie des formes juvenile, Ecologies*, by Odile Poncy. *Economic Botany*. 40(4):501-502. 1987.
67. Flavonoid variation in *Erythroxylum*. *Phytochemistry*. 18 pp. (with B.A. Bohm, T. Loo and K.W. Nichols). 47(3):833-837. 1988.
68. *Erythroxylaceae*. In R.A. Howard, ed. *Flora of the Lesser Antilles*. Harvard University Press. 4:543-551. Harvard University, Cambridge. 1988.
69. New species and a new combination of *Erythroxylum* (*Erythroxylaceae*) from

- Amazonian Peru. Contribution to the study of the flora and vegetation of Peruvian Amazonia. XIV. *Candollea*. 43(1):421-431. 1988.
70. New taxa of *Erythroxylum* (Erythroxylaceae) from the Venezuelan Guayana. *Brittonia* 40(3):256-268. 1988.
  71. Erythroxylaceae. In G. Harling & L. Andersson, eds. *Flora of Ecuador*. 44 pp.
  72. Erythroxylaceae. In J.A. Steyermark, ed., *Flora of the Venezuelan Guayana*. 27 pp. Missouri Botanical Garden. Accepted for publication.
  73. Erythroxylaceae. In W.D. Stevens, ed. *Flora de Nicaragua*. Missouri Botanical Garden. 18 pp. Accepted for publication 12 Feb 1987.
  74. Erythroxylaceae. In B. Hammel & M. Graham, eds. *Manual Flora of Costa Rica*. Missouri Botanical Garden. 12 pp. Submitted for publication 22 May 1987.
  75. Erythroxylaceae. In W. Burger, ed. *Flora Costaricensis*. *Fieldiana Botany*, n.s. Submitted to editor 22 May 1987.
  76. A revision of the South American species of *Brunfelsia* (Solanaceae). 434 pp., 115 figs. In preparation.
  77. *The Ethnobotany of Chinchero, an Andean Community in Southern Peru*. (with Christine Franquemont, *et al.*), 148 pp., 36 figs. *Fieldiana Botany*, n.s. Submitted for publication.